YOUR NEWSLETTER WITH THE LATEST IN RADIATION SAFETY

THE RADCO REGISTER

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A CECOM RADIATION SAFETY NEWSLETTER FOR THE US ARMY NATIONAL GUARD

DIRECTORATE FOR SAFETY
US ARMY, CECOM
Safe by Design

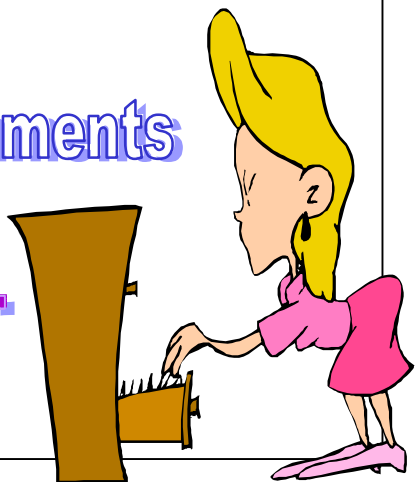
Here's One for the FILES

Modern Army Record Keeping System (MARKS)

NEW

Radiation Safety Number Assignments

SO..... on your "MARKS" ... get set..... FILE !!



Your STATE and LOCAL RADIATION SAFETY OFFICERS (RSO) are: *(fill-in)*

SRSO:_____ **Phone:**_____
ASRSO:_____ **Phone:**_____

LRSO (CSMS):_____ **Phone:**_____

LRSO (USP&FO):_____ **Phone:**_____

LRSO (MATES/UTES):_____ **Phone:**_____

LRSO (AASF):_____ **Phone:**_____

IN THIS ISSUE :

The distribution and content of this newsletter is directed to Army National Guard activities for which the U.S. Army Communications-Electronics Command (CECOM) Directorate for Safety, Radiological Engineering Division, serves as RSSO. The RADCO Register is published quarterly and is intended as a medium for the exchange of radiation safety information between the National Guard Bureau and CECOM. The primary distribution of this newsletter is to Occupational Health/State Safety Offices, U.S. Property & Fiscal Offices, and Combined Support Maintenance Shops, with local reproduction encouraged.

Visit us on the **WEB:**
www.monmouth.army.mil/cecom/safety

RADIATION SAFETY STAFF OFFICER (RSSO):
Mr. Stephen G. LaPoint,
Director
Mr. Joseph M. Santarsiero,
Deputy Director

RADIOLOGICAL ENGINEERING (RE) DIVISION STAFF:
Mr. Richard J. Lovell, x6441
Chief
Mr. Barry Silber, x6440
Health Physicist
Mr. Ken Proctor, x6446
Electronics Engineer
Mr. Hugo Bianchi, x6444
Health Physicist
Mr. Gary Ziola, x6433
Health Physicist
Ms. Alice Kearney, x6432
Safety Specialist
Mr. Burt Cummings, x6426
Health Physicist
Mr. Al Perrella, x6443
Health Physicist

CONTRACTOR SUPPORT TO RE DIVISION STAFF:
Ms. Paula Jeter, x6436
Health Physicist
Mr. Nick Antonelli, x6448
Count Room Technician
Ms. Mary Chislett, x6452
Instrument Technician

MAILING ADDRESS:
Commander, US Army CECOM
ATTN: AMSEL-SF-RE
Bldg 2539, CHARLES WOOD AREA
Fort Monmouth, NJ 07703-5024
VOICE: DSN: 987-3112
COM: (732) 427-3112
FACSIMILE: DSN: 992-6403

LABORATORY ADDRESS:
Commander, US Army CECOM
ATTN: AMSEL-SF-RE **(LAB)** Bldg 2540
Fort Monmouth, NJ 07703-5024
VOICE: DSN: 987-5370
COM: (732) 427-5370
FACSIMILE: DSN: 987-2667

MESSAGE: CDR CECOM FT MONMOUTH NJ //AMSEL-SF-RER//
EMAIL: AMSEL-SF@mail1.monmouth.army.mil

ON GUARD...

On Your "MARKS"....
Get Set....GO....!!

And their "**off**"……
"**off**"icial that is! Keeping good records on file is the only "official" way to demonstrate you're maintaining an effective Radiation Safety Program (RSP). As you have probably experienced during your RSP evaluation, we take a look at your files to see if they are maintained IAW the Modern Army Record Keeping System, otherwise known as "MARKS." Since AR 385-11 was replaced by AR 11-9 in May 1999, the MARKS file numbers have followed suit. As of 1 Oct 01, the following radiation safety related file numbers will be official, as published in AR 25-400-2, the MARKS Regulation. For further information, such as the description or disposition of each MARKS number assignment, you can visit http://www.rmd.belvoir.army.mil/ and click on Records Management Division. So… **On your "MARKS", Get Set** and **GO** replace those old files with the following new MARKS number assignments.

OLD FILE NUMBER	NEW FILE NUMBER	TITLE
385-11a	11-9d	Radiation Safety Surveys
385-11b	11-9e	Radiation Safety Training, Course Materials and Aids
385-11c	11-9f	Radiation SOPs, Directives and Guidance
385-11d	11-9g	Radiation Analyses (Wipes, QA)
385-11e	11-9h	Radiation Sources Inventory/accounting files (shipping/receiving; waste shipments)
385-11f	11-9a	Personnel Dosimetry files (ADRs, DD 1952s)
385-11g	11-9b	Dosimeter Controls
----------	11-9c	Personnel Bioassays
385-11h	11-9i	Radiation Safety Committee files
385-11i	11-9j	Radiation Safety Inspections (external)
385-11j	11-9k	Radiation Reports
385-11k	11-9m	Radiation Incident Files
385-11m	11-9n	Radioactive Material Licensing

(con't)

"MARKS"

OLD FILE NUMBER	NEW FILE NUMBER	TITLE
385-11n	11-9p	Instrument and Source Calibration Files
385-11p	11-9q	Radiation Facilities
----------	11-9r	User listings
----------	11-9s	Decommissioning records
----------	11-9t	Declared Pregnancies
----------	11-9u	ALARA Reports
----------	11-9v	Military-exempt Lasers
----------	11-9w	Type-classified RF EMR Emitters
----------	11-9x	"RF Controlled" and "RF Uncontrolled" Environments

Did Someone Say "SURVEY" ?!? (Part 2)

Last RADCO we went over the procedure for performing a dose rate survey. As you may recall, this RSO duty involves periodically walking thru your radioactive material storage area with your "actively" calibrated AN/PDR-77 or AN/VDR-2 to determine the ambient radiation levels. This survey, when properly performed, will give you a good idea of the radiation dose rates to personnel that work in and around the storage area.

Now just as important as performing this survey is **documenting** the results of your survey. A good rule of thumb is: if you didn't document it…you didn't do it!! We bring this to your attention because it is during our program evaluations that we can guarantee you will hear those dreaded of words *"Show me your surveys?"*

Where you decide to display these records is up to you. If you choose to post the results of your surveys that's fine, but remember to retain copies of your surveys on file for our review.

SO…it's 90 degrees in the warehouse and you've managed to schlepp your RADIAC around the radioactive material storage area like a dog in heat … your RADIAC has clicked numerous times and

recorded a few good readings…. now what should you be doing with those curious looking numbers….Well, here's the skinny when it comes to:

Documenting a Radiation "Dose Rate" Survey:

a. Make a simple sketch of the area that includes the material and the immediate surrounding areas. It is not necessary to sketch the entire shop or warehouse. Designate on the sketch the location of the sources and entrance to the area along with any adjacent occupied and uncontrolled access areas, if any. In the mix, include a background location taken away from the source(s) as well.

b. Show the location of all dose rate readings by noting the distance from the source. Preferably readings should be taken at a good representative distance that an individual would be occupying relative to the radioactive source(s). Be sure to designate units of measurements. (No units!?! …. then your survey is incomplete).

c. Be sure to show all the other required information on your form such as the date, reason for survey, instrument used, serial number of instrument, calibration date, date calibration is void, and the name of surveyor. Also, check that all your required postings are in place, legible, and up-to date. It is not uncommon to find POCs and phone numbers that no longer exist still being posted…so make sure those are up-to-date as well.

Your survey report is now complete. You may choose to post it (posting is not required) or you may file it away. In either case it allows you to communicate with other personnel about the hazards associated with the radioactive materials being stored…. or lack thereof.

Next RADCO we'll discuss how to perform a proper swipe survey for when its time to hunt for that elusive would-be contamination. ☆

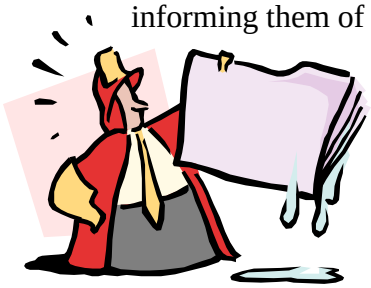
Smooth Moves…. Relocating your Radioactive Material Storage Area

Relocating your radioactive materials to a new storage location can be a little unsettling without the proper know how . **Background, close-out** and **initial radiation survey**, **survey map** and **response testing** are just some of the terms you need to be familiar with prior to the move. A little pre-planning goes along way in helping to ensure a "smooth move" when relocating your storage area.

First let's assume that the new storage area is located in a secure area…right? Prior to moving/storing radioactive material in that area, a **background survey** must be performed. **Response test** your AN/PDR-77 (or equivalent) RADIAC meter and perform a radiation survey of the storage area, as well as areas adjacent to the storage area (hallways, administrative areas, etc.). Record the radiation readings and annotate "Background Survey" on the **survey map.**

Now you're ready to package/transport the radioactive material from the old storage area to the new. If the radioactive material is to be transported on public highways (off post) it must be shipped IAW the Department of Transportation (DOT) regulations. The good folks at your USP&FO are familiar with the DOT regulations and can assist you with the shipment. Be sure to notify us, your RSSO, prior to moving any individually controlled radioactive commodity i.e., CAM, CAD, AN/UDM-2, MC-1 etc.

Now that the radioactive material is stored in the new area an **initial Survey** must be performed. Radiation readings must be taken as outlined in the Baseline survey instructions above. Post the new storage area with the appropriate radiological postings and generate a letter to the local fire department informing them of



the new storage location and the types and quantities of radioactive materials being stored.

So you've made the move… but we're not done having fun just quite yet! A **close-out survey** of the old storage area must be performed. This should be more detailed than the surveys you've done in the past. Perform a few radiation readings of the area and document these on a survey map. Ensure several contamination wipes (Metricel for tritium and nickel-63, NUCON smears for all other isotopes) are taken. The amount and extent of wipes taken should encompass those areas and surfaces where radioactive materials were once stored and/or maintained to ensure no residual contamination exists. Annotate "Closeout Survey" on the "Wipe Test Analysis Request Form" and forward the wipes with the completed form to our laboratory.

Once you receive the results indicating the area is within acceptable levels for surface contamination, remove the "Caution Radioactive Material" posting and file the survey results in your radiation files.

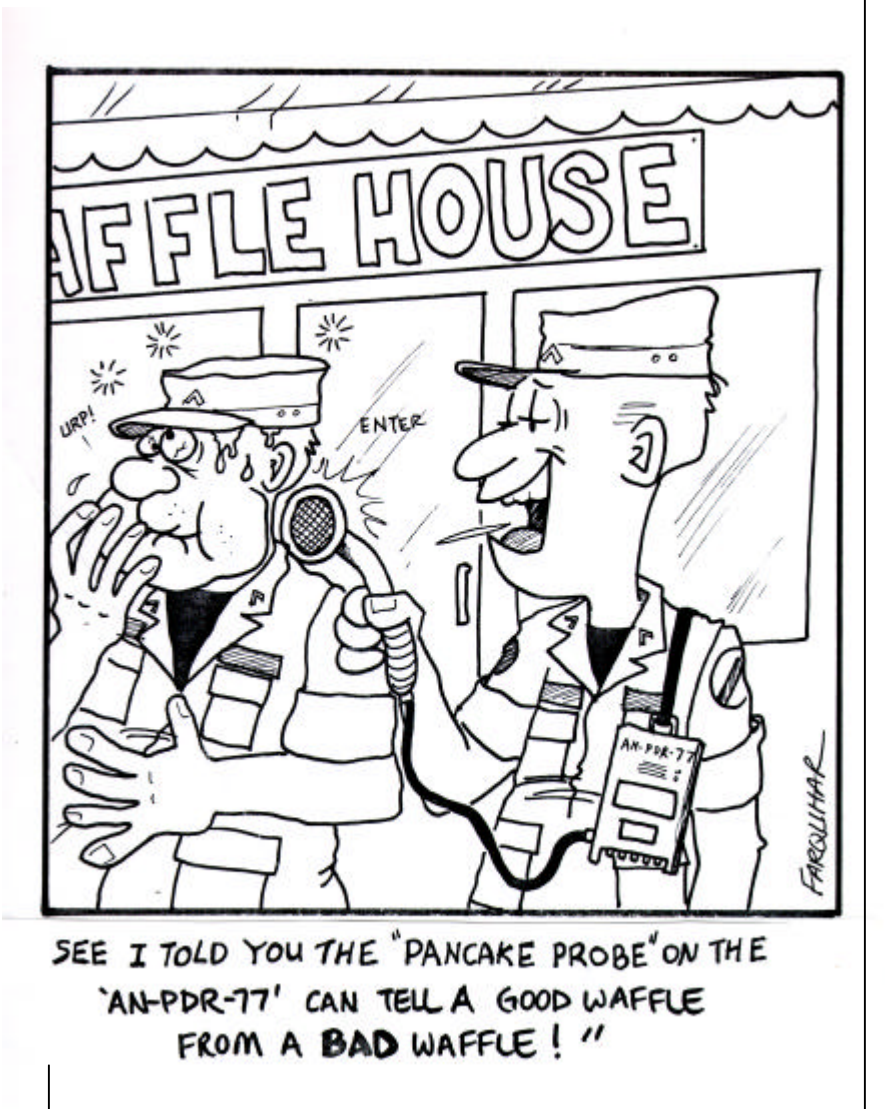
As you can see, a bit of work is required when establishing a new storage area. Your efforts, however, will be rewarded knowing you've left the area as "clean" as you first found it. If you have any questions or require assistance with the "smooth move" of your radioactive material storage area …we're always here to help. ☆

A Super Effort in Shy Town

Congratulations for a job well done to all of the Army National Guard students who attended our Radioactive Commodity Identification and Transportation (RCIT) Course held in Shy Town (Chicago), Ill, 24-26 July 01. We would especially like to recognize two students who distinguished themselves by making the most use of the word "**Da**" (i.e., Da Cubs… Da Bears… Da Bulls, etc.) ☺ ….by the way they also achieved the highest final course grade of 99. That honor goes to Michael Flahave from the DOL Warehouse for Minnesota ARNG and David Hayes from the USP&FO for Nebraska ARNG. Keep up the good work. You and all of your classmates are a credit to "Da Guard" and its fine Radiation Safety Programs.

.....in the field

by Lyle Farquhar



Radiation Safety Training Schedule for FY02

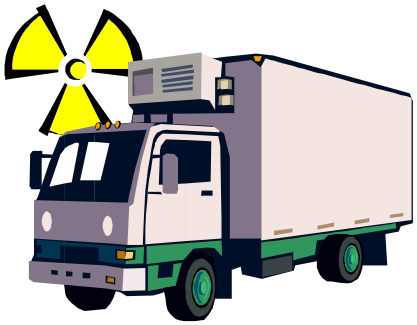
The CECOM Directorate for Safety is pleased to announce our Radiation Safety Training Schedule for FY02. Three 40-hour Radiation Safety Officer (RSO) Training Courses, two 24-hour Radioactive Commodity Identification and Transportation (RCIT) Training Courses and one 40-hour LORAD RSO Training Course will be offered. We have sent the FY02 training schedule memorandum to your SRSO. Included in the memorandum are detailed instructions on how to properly apply for courses, specific training dates, and application cut-off dates. To help you to decide which class fits your training needs, the following list is provided:

RCIT
Sacramento, CA - March
RSO
Atlanta, GA - April
RSO
Boston, MA - May
RSO
Dallas, TX - June
LORAD RSO
WAATS, AZ - June
RCIT
Kansas City, MO - July

Again, you must **contact your SRSO** for further information and get his/her approval before you apply for any of the above courses! Radiation Safety Program management, to include training, is a major responsibility of the SRSO. Be part of radiation safety team and keep the SRSO advised of your training needs. ★

Rolling, Rolling, Rolling..... Keep that RAD STUFF Rolling!

U.S. Department of Transportation (DOT) regulations harmonize! What does this mean? DOT is singing with the International Civil Aviation Organization (ICAO), the International Atomic Energy Agency (IAEA) and the United Nations (UN)? Not exactly, but the DOT has amended its regulations in order to align DOT, Dangerous Goods requirements with international standards. The "**Final Rule"** (this is not a title to a song) was published on June 21, 2001 with an effective date of October 1, 2001.



We know what your thinking. CECOM DS hasn't provided us with the appropriate guidance yet and how are we ever going to comply with this on such short notice! Don't panic just yet! With the exception of international shipments (call us), we have until October 1, 2002 to comply with the changes, although voluntary compliance is encouraged.

The most obvious change is an increase in the number of proper shipping names from 9 total to 28 and new UN numbers. If you ship via ground transport the same names and numbers apply with little change, but if you ship by air the international numbers will apply. For example, the proper shipping name and UN number for the AN/UDM-2 RADIAC Calibrator set will change from:

"Radioactive material, special form, n.o.s., UN2974"

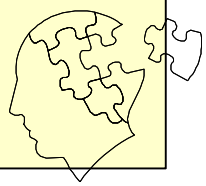
to

"Radioactive material, Type A package, special form, UN3332".

Clearly we cannot include all the details of the new changes here. These changes and new guidance will, however, be incorporated into revisions to our TB 43-0137, "Transportation Information for CECOM Radioactive Commodities" and into future 40 hour RSO and 3 day RCIT training courses. With the changes to the TB, we will be incorporating guidelines for all radioactive commodities in the army rather than just CECOM's commodities.

Stay tuned for additional information. ★

PUZZLES & BRAIN-TEASERS



QUICKIE QUIZ:

1. To cut down on paperwork and speed up the process, you should bypass your State Radiation Safety Officer and send all requests for Radioactive Waste Disposal Instructions directly to U.S. Operations Support Command (OSC).

TRUE or FALSE

2. The NRC licensee for the M43A1 CAD, the CAM, the ICAM and the ACADA

requires you to post an NRC Form 5 in a conspicuous area.

TRUE or FALSE

3. Situation: You have five Pm-147 LAW sights secured in a storage room. Are you required to post the storage room with a "Caution Radioactive Material" sign?

YES or NO

4. The Mobile VACIS contains 1.6 Curies of:

a. Nickel-63
b. Cesium-137
c. Krypton-85
d. Cobalt-60

5. The RADIAC instrument (i.e., model SM-400A) used by the ARNG to survey their LORAD x-ray device contains which type of detector:

a G-M tube
b. a scintillation detector
c. an ion chamber
d. a klystron tube

...the answers are on the last page!!

WORD SEARCH *for* RSOs

M	Q	R	Q	S	C	P	A	M	B	T	E	U	Y	G
E	C	E	E	D	U	E	O	M	S	E	I	O	E	N
T	O	G	J	R	O	C	S	E	M	J	T	C	V	I
R	B	U	K	F	E	C	T	I	D	A	A	A	R	Z
I	A	L	L	C	L	E	U	O	U	I	G	M	U	I
C	L	A	G	V	P	N	S	M	D	M	O	X	S	N
E	T	T	Y	I	H	I	R	A	E	N	G	B	W	O
L	X	I	W	L	M	Y	R	O	T	N	E	V	N	I
A	C	O	M	E	R	A	F	H	N	V	T	U	S	L
R	Y	N	T	U	D	E	L	G	N	I	T	S	O	P
A	X	R	M	I	I	Y	T	A	N	N	U	A	L	A
L	Y	F	U	T	N	T	T	R	A	H	P	L	A	R
A	L	M	I	I	Y	D	I	S	A	N	U	C	O	N
R	A	D	W	A	S	T	E	R	Y	U	Y	Z	X	G
G	M	B	V	J	X	Q	Q	N	T	C	Q	K	J	I

ALARA	GAMMA	RADWASTE
ALPHA	INVENTORY	REGULATION
ANNUAL	IONIZING	SURVEY
ARNG	METRICEL	TRITIUM
BETA	MONTHLY	WIPETEST
CECOM	NUCON	RADIUM
CESIUM	POSTING	
COBALT	QUARTERLY	
DOCUMENT	RADIAC	
DOSIMETRY		

NONIONIZING CORNER .....

Jump Starting Your NON-IONIZING RADIATION SAFETY PROGRAM

Setting up your Non-ionizing radiation safety program got you running in circles ???? We've already provided some ideas on how to jump start your non-ionizing (NIR) radiation safety program…so let's take a minute to recap on some of those ideas.

We suggested that the first place to start was to look over your inventory and/or inventory listing. This would involve looking at the actual hardware, the associated user/technical manuals and your equipment inventory to determine which items would be classified as being NIR producing devices. Granted, your inventory is bound to be very large but some general ideas on what characteristics to look for will help. At the very least you'd want to know whether the item transmits radiofrequency (RF) energy and/or emits visible or invisible light. Some of the equipment descriptions to look for would include: ***Rangefinders***, ***Target Illuminators***, ***Target Designators***, ***Radar Sets***, ***Electronic Countermeasures Sets***, ***Transponders***, ***Radio Sets***, ***Satellite Communications Terminals/Systems***, ***Fire Control Systems/Tactical Fire Detection Systems***, ***Searchlights*** (visible and Infrared, etc), ***Handheld Radios*** (e.g. "Walkie-Talkie's"), ***Laser Infrared Observation Sets*** and ***Interrogator Sets***.

To help speed up the process, you'd be well advised to stop by your local maintenance shop(s) to learn which items they routinely work on that would fall into the above equipment type descriptions…and don't forget to bring the donuts ☺

You can even refer to our **TB 43-0133**, ***Hazard Controls For Radiofrequency and Optical Radiation Producing Equipment*** to determine which of your items would be classified as being NIR producing devices. You can find it at: http://www.monmouth.army.mil/cecom/safety/rpub/tb430133.htm Once there, you can look at the document, download it to your hard-drive or print it out locally.

Finally, we suggested that you put together a ***NIR Safety Binder***. After referring to **TB 43-0133**, make copies of the relevant pages that provide NIR safety information on each of your NIR items/ systems and insert them into your binder.

Add a section to your binder that lists all the personnel in your shop and/or installation that routinely work on/with such equipment. This list can be broken up into two parts; one for RF and one for laser/high intensity optical sources. Included for each section should be corresponding records that indicate when these individuals last had operational training and their most recent NIR safety training.

So there you have it…… jump-starting your NIR safety program in a nutshell. And if you're like me, then you can't wait to saddle up your horse and get started setting up your program!

See you next time!! ✯

QUICKIE QUIZ SOLUTIONS:

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TRUE or ***FALSE***

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WORD SEARCH *for* RSOs

SOLUTIONS: